tech.mit.edu



WEATHER, p. 2 WED: 50°F 39°F Chance of showers THU: 54°F | 38°F Mostly sunny

Volume 133, Number 47 Tuesday, October 22, 2013



MIT Police and the Department of Facilities held a ceremony on Friday morning outside the Stata Center to dedicate a memorial stone in honor of Officer Sean Collier.

For Boston FSILG houses, temporary large events ban

Not allowed to hold events that exceed resident occupancy limit

By Anne Cai

MIT fraternities, sororities, and independent living groups (FSILGs) with houses in Boston are now prohibited from having events that would cause the number of individuals in their building to exceed their posted residential occupancy, Assistant Dean of FSILGs Marlena Martinez Love announced in an email Friday

The email - sent to the Panhellenic Association (Panhel), Interfraternity Council (IFC), and Association of Independent Living Groups (AILG) — announced that following inspections of nine FSILG houses and discovery of "issues with building exit doors," Boston-based FSILGs cannot hold

parties or other large events in their houses until further notice.

This affects 19 of MIT's 27 fraternities, 3 of the 6 sororities, and 2 of the 6 independent living groups. Brookline and Cambridge properties are not immediately affected, according to the email. With the same safety concerns in mind, however, the previously imposed assembly occupancy limit of three times the legal residential occupancy is still in place for those FSILG properties.

In a meeting last month with Boston's Inspectional Services Department (ISD), the ISD's Deputy Commissioner "requested that each property provide information justifying its current posted assembly occupancy figure."

FSILGs, Page 7

EdX's new developments, partners

A number of recent developments have been announced regarding edX, the online learning initiative started by MIT and Harvard that has since accepted various other partner institutions.

On Sept. 10, edX announced that Google would participate in a partnership to develop Open edX, the open source software for the platform. As part of the partnership, Google will also develop and run a site announced as MOOC.org, which is planned to be a platform for non-edX partner organizations to publish online courses.

On Sept. 17, edX announced that MITx would offer certificates for students who finish specific sets of online courses. According to the press release, these "XSeries' sequences" will offer tracks of related courses. The announcement mentions the first two sequences available, Foundations of Computer Science and Supply Chain and Logistics Management. The content will be produced by MIT faculty as has been the case with MIT's other massive open online courses (MOOCs) through its MITx initiative.

Other edX developments involve international efforts using its platform. On Oct. 3, edX announced that France would build a new "national MOOC and blended learning portal" on edX's platform. The press release stated that over one hundred French institutions would be a part of the effort.

On Oct. 10, edX announced that its platform would be used for a similar program in China. A group of Chinese universities will build a new online center, XuetangX, for MOOCs. The courses hosted there will include curriculum produced by some of the participating universities. The press release stated that blended learning courses would also be hosted on the platform and used on some university campuses in China.

-Austin Hess

Reif joins manufacturing group

Will co-chair Obama's national committee on innovation

By Tushar Kamath

On Sept. 26, the White House announced that President L. Rafael Reif will co-chair the newly formed Advanced Manufacturing Partnership (AMP) Steering Committee 2.0. This committee, launched by President Barack Obama to strengthen U.S. manufacturing, was formed from the recommendations of a previous Advanced Manufacturing Partnership Steering Committee that reported its findings in July 2012. AMP 2.0 is composed of public university presidents and private industry CEOs from throughout the U.S.

National Network for Manufacturing Innovation

According to Associate Provost Martin A. Schmidt PhD '88, the faculty lead for AMP 2.0, the new committee was formed for "executing a number of [AMP 1.0's] recommendations. Probably the most prominent of these was the creation of national network of manufacturing institutes." According to the government's AMP website, a National Network for Manufacturing Innovation (NNMI) would include regional hubs, each with a "Institute for Manufacturing In-

Manufacturing, Page 10



CHRISTOPHER A. MAYNOR—THE TECH

John O. Bolaji ′16 squats a fellow Kappa Sigma brother on stage at Sunday evening′s Late Night event. There were more than twenty acts in this year's philanthropic event, which is hosted by Sigma Kappa sorority. All profits go towards the Sigma Kappa Foundation to support Alzheimer's research.

IN SHORT

Family Weekend is this Friday through Saturday!

The Fall 2013 UROP Supervisor/ Sponsored Research Funding application deadline is Thursday, Oct. 31, which is also the deadline for Credit/Volunteer UROPs. Submit your proposals at https://sisapp. mit.edu/uropweb/home.mit.

Amazon.com will begin collecting sales tax on Massachusetts purchases on Nov. 1. Stock up on tax-free purchases now!

Sign up for a student-faculty dinner! The UA will reimburse a group of 3–6 students up to \$20/person.

Send news information and tips to news@tech.mit.edu.

WE WANT YOU TO JOIN THE TECH!

To learn about positions that suit your interests, send an email to

join@the-tech.mit.edu.

Q.E.D.: WHERE DO YOU LIVE?

I don't move from in front of a functional computer. FUN, p. 6

DUMBING THINGS DOWN

Why does this seem less ... accurate ... when they explain it? FUN, p. 6



I INTERVIEW REALLY WELL. REALLY.

I know all of your tricks. I am the master of this interview.

FUN, p. 6

SKETCH YOUR LOOK: JEANS

How much do you know about jeans and how to wear them?

CAMPUS LIFE, p. 8

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Longtime executive at Goldman is departing

J. Michael Evans, a Goldman Sachs executive once seen as a possible candidate to succeed Lloyd C. Blankfein as chief executive, is leaving the Wall Street firm.

In a memo sent to Goldman employees Monday, Blankfein and Gary D. Cohn, his second-in-command, announced that Evans, 56, had decided to retire and would leave at the end of the

"Michael has played a number of leadership roles in building important businesses and growing our client franchise across divisions and regions," Blankfein and Cohn wrote.

Evans, who joined Goldman in London in 1993, has run several big divisions at the bank. He moved to Hong Kong in 2004 to be chairman of Goldman Sachs Asia Pacific, a position he held until 2011, when he was named global head of growth markets.

But Evans is best known outside the bank for his leadership role on Goldman's Business Standards Committee, a group formed after the financial crisis as part of a push by the bank to be more transparent after criticism that it put its own interests ahead

Over the years, it has been suggested that Evans, a Canadian and onetime Olympic-level rower, might succeed Blankfein as chief executive. His name, however, has come up less in recent years, leading to speculation inside the bank that he might move

Cohn is considered to be the front-runner to take over from Blankfein. But the chief executive, who is 59, has shown no sign of wanting to move on, increasing the chances that another candidate will instead be his successor.

-Susanne Craig, The New York Times

Rainwater problem hits Japan's closed nuclear plant

TOKYO — The operator of Japan's wrecked nuclear plant said Monday that rainwater from a weekend storm became contaminated as it collected behind barriers meant to stop radiation leaks. The toxic water overflowed those barriers at several locations, with some of it possibly spilling into the Pacific

It was the latest in a litany of lapses and aggravations for the problem-plagued cleanup of the Fukushima Daiichi plant.

The operator, the Tokyo Electric Power Co., or TEPCO, said water from heavy rain Sunday had accumulated behind foothigh concrete walls that encircle clusters of storage tanks. TEP-CO built those barriers to contain spills from the storage tanks, a problem that has led to intense public criticism of the company.

However, on Sunday the barriers acted as dams to trap the rainwater into unintended ponds. Water levels in 11 of those ponds rose high enough to spill over the barriers, TEPCO said. It said some of the spilled water may have flowed down a drainage ditch into the Pacific outside the plant's artificial harbor.

After the rain, TEPCO said it tested water in the ponds that overflowed and found that a half-dozen were contaminated with levels of radioactive strontium-90 above the limit of 10 becquerels per liter set by regulators for releasing water into the sea. Radiation levels at the most contaminated site were 71 times that limit, TEPCO said.

Releases of strontium are particularly worrisome because it can collect in human bones and possibly cause leukemia, experts say. TEPCO did not say where the strontium had originated, though the most likely candidate appeared to be radioactive particles scattered on the ground, possibly by the explosions that followed the triple meltdown in March 2011.

Another puzzle was why the rainfall Sunday, which the Japan Meteorological Agency measured at about 4 inches, was enough to overwhelm the foot-high barriers. On Monday, TEPCO offered one possible explanation, saying the barriers had already trapped water during a typhoon that swept through eastern Japan last week.

—Martin Fackler, The New York Times

US official: Al-Qaida affiliate weakening Syria peace efforts

By Michael R. Gordon THE NEW YORK TIMES

PARIS — A senior State Department official said Monday that an al-Qaida-affiliated rebel group was undermining the chances for a successful international effort to end the war in Syria.

By challenging moderate Syrian rebels, the group, the Islamic State of Iraq and the Levant, was forcing them to fight on two fronts and divert resources from their battle with the government of President Bashar Assad, the official said.

By presenting an extremist face to the world, the official said, the group was also aiding Assad's efforts to portray the conflict in Syria as a tug-of-war between the government and jihadists.

'That has to give the regime comfort and confidence, and it will make the task of extracting concessions from the regime at the negotiating table more difficult," said the official, who declined to be identified in accordance with the State Department's protocol for briefing reporters on active diplomacy.

Secretary of State John Kerry, who arrived in Paris on Monday for the first of three days of Middle

East diplomacy, is scheduled to meet with diplomats from 10 nations in London on Tuesday to discuss preparations for a Syria peace conference. The conference is expected to be held next month in Geneva.

A principal goal of the Geneva meeting is the establishment of a transitional government that would not include Assad.

But the senior State Department official said fighters from the Islamic State of Iraq and the Levant, or ISIS, were hurting the peace talks' prospects and had also hampered the flow of U.S. and other foreign assistance across the border to the moderate resistance inside Syria.

"It has been very disruptive to our cross border efforts disruptive," the official said.

As if to illustrate Assad's growing confidence, the Syrian president recently gave an interview to a Beirut television station in which he indicated that he hopes to run for re-election next year.

Even as the Obama administration has pointed to the growing role of extremists in Syria, its policy has continued to be a target for critics, who complain that the United States has offered the moderate Syrian opposition too little, too late. U.S. officials have not announced any major new efforts to provide arms and other forms of military support to the moderate opposition it is hoping will counteract the role of extremists.

Kerry was also scheduled to meet Monday with Qatar's foreign minister, Khalid bin Mohamed al-Attiyah, before briefing senior officials from the Arab League on the status of the talks between Israel and the Palestinians.

During his Tuesday meetings in London, Kerry will gather with the London 11, the group of nations backing the moderate Syria opposition. Ahmad al-Jarba, head of the political wing of the moderate Syria opposition, is expended to attend the meeting.

Keystone pipeline opponents plan widespread civil disobedience

By Sarah Wheaton

THE NEW YORK TIMES

PITTSBURGH — Opponents of the Keystone XL oil pipeline outlined new plans for persuading President Barack Obama to reject the project at a conference for young climate activists here over the weekend. And while most organizers continued to express optimism that the administration would not allow TransCanada to complete the 1,700-mile pipeline from Alberta's oil sands to Gulf Coast refineries, they are preparing for the likelihood that the project will win approval.

If the State Department's National Interest Determination finds in favor of the pipeline virtually the last hurdle before approval — demonstrators will risk arrest at more than 100 protests in 37 states, said Todd Zimmer, a campaigner with Rainforest Action Network who helped develop new training and recruitment guidelines for such direct action against Keystone XL. As of Monday, nearly 76,000 people have pledged to engage in "dignified, peaceful civil disobedience that could result in my arrest in order to send the message to Obama and his administration that they must reject the Keystone XL pipeline."

The protests at the State Department and other federal offices around the country could come within a week of the national interest announcement, Zimmer said, and actions may also take place at TransCanada offices and those of Environmental Resources Management, the consulting firm whose findings that Keystone XL would have minimal environmental impact have been called into question by opponents.

On Sunday, as part of a twohour presentation about Keystone XL at Power Shift, a gathering of almost 8,000 mostly college-age climate activists, organizers also encouraged local groups to make "climate time capsules."

The red tubes, filled with artifacts of local climate efforts, would most likely be presented in Washington in mid-November, and organizers hope to bury some of them along the planned Keystone XL route.

If Obama wants to build the pipeline, said Kendall Mackey of the Energy Action Coalition, "he's going to have to dig up our climate legacy and bury his own."

But the activists tended to be less optimistic than the organizers. T.R. McKenzie, who works with the Deep Roots United Front in Jefferson, S.D., said the national organizations "need to stop thinking that petitions and other ways of symbolic action" are going to prevent Keystone XL.

Chilly weather finally arrives

STAFF METEOROLOGIST

This October has been characterized by incredible autumn weather. It has been warm, sunny, and dry. To date, Boston has recieved only 0.50 inches of precipitation, which is over 2 inches below normal. Additionally, much of October saw high temperatures above average, except for October 9-14, which saw high temperatures right around average. The overall monthly average temperature through Oct. 20 is 60.5°F, which is 4.8°F above the climatological average.

Unfortunately, our streak of warm weather is about to come to the end. Today is likely the last day for at least a week that we will experience temperatures above 60°F. A cold front passing through tonight will usher in a much colder air mass for the rest of the week, with highs in the low 50°F's and overnight lows in the mid to high 30°F's. Additionally, tomorrow we may experience a chilly rain due to a developing coastal low pressure system.

Extended Forecast

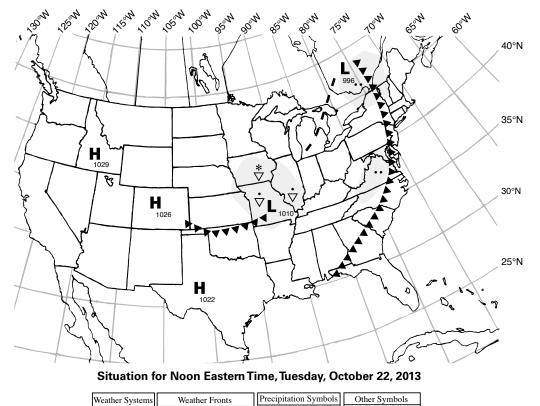
Today: Increasing clouds. High 69°F (21°C). Southerly wind at 5-15 mph.

Tonight: Partly cloudy. Low 43°F (6°C). West wind at 10–15

Tomorrow: Mostly cloudy, chance of showers. High 50°F (10°C). Low 39°F (4°C). Northwest wind at 5–8 mph. Thursday: Mostly sunny. High 54°F (12°C). Low 38°F (3°C).

West wind at 15-20 mph. Friday: Mostly sunny. High 52°F (11°C). Low 36°F (2°C). West

wind at 10-15 mph.



Weather Systems	Weather Fronts	Precipitation Symbols		Othe	er Symbols	
			Snow	Rain		Fog
High Pressure	Trough	Showers	*	•	-	C
_	Warm Front		V	V	12	Thunderstor
Low Pressure		Light	*	•	$-\infty$	Haze
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Hurricane			nto.	_		orology Staff
U	Stationary Front	Heavy		. • 1		

Medicaid expansion is set for Ohioans

By Trip Gabriel
THE NEW YORK TIMES

COLUMBUS, Ohio — As a Republican chairman of the House Budget Committee in the 1990s, John R. Kasich wielded a ferocious budget ax. On Monday, as Ohio's governor, Kasich defied his party's majorities in the state Legislature to push through a multibilliondollar expansion of Medicaid under President Barack Obama's health care law.

By a 5-2 vote, an obscure committee, the Controlling Board, which normally oversees relatively small adjustments to the state budget, accepted \$2.5 billion in extra Medicaid funds from the federal government. The money, recently approved by Medicaid administrators in Washington, will provide coverage for 275,000 Ohioans who have not been eligible for the program, the Kasich administration said.

The vote was an extraordinary — and possibly illegal, critics in Kasich's own party said — end run by the governor around the Gen-

eral Assembly.

Kasich, who initially declared himself an opponent of the Affordable Care Act and who has declined to set up a state online health insurance marketplace, has argued all year that his sense of Christian compassion, not to mention cool economic practicality, favored extending Medicaid to poor adults and those with disabilities who do not currently qualify.

But Republican majorities in both houses of the General Assembly blocked expansion. Opponents expressed disbelief that Washington would keep its promises under the health care law to pay almost all of the costs of expanding Medicaid, the joint federal-state health insurance program for the poor, and worried that Ohio taxpayers would have to pay.

A budget sent to the governor by the General Assembly forbade Medicaid expansion without lawmakers' approval. Kasich vetoed that item. At least three bills to expand Medicaid have failed.

Kasich, who has championed job creation as he prepares for a

re-election campaign next year in his swing state, has argued that expanding Medicaid eligibility will be an economic booster shot, because companies will be lured to Ohio by a healthier workforce. Expansion is supported by state hospitals, the County Commissioners Association of Ohio and the Ohio Chamber of Commerce.

Under the Affordable Care Act, low-income workers are to receive federal subsidies to buy insurance starting in 2014. But there is a "coverage gap" for some who earn less than the poverty level but do not currently qualify for Medicaid.

The federal law allows states to expand Medicaid eligibility to people with incomes of up to 138 percent of the federal poverty level, about \$15,860 for an individual. The 2012 Supreme Court decision that upheld the law also allowed states to opt out of Medicaid expansion.

With Monday's vote, Ohio became the 25th state plus the District of Columbia to expand Medicaid, according to the Kaiser Family Foundation.

Student kills math teacher, then himself, at Nevada middle school

By Timothy Williams

THE NEW YORK TIMES

A Nevada middle school student shot and killed a math teacher on Monday, then fatally shot himself in front of children who were gathering for class at the beginning of the school day, the authorities said.

The teacher was killed while trying to protect other students from the armed boy, the authorities said. The Associated Press reported that the teacher was identified as Michael Landsberry by his sister-inlaw, Chandra Landsberry. She said he was a military veteran with a wife and two stepdaughters.

The boy, whose name and age have not been released, also wounded two other students during the attack, but hospital officials said their injuries were not life-threatening. On Monday afternoon, one of the students was listed in serious condition and the other was in fair condition, hospital officials said.

It was not immediately clear what

prompted the shooting, which occurred at Sparks Middle School in Sparks, Nev., about 7:15 a.m., just before the start of school, said Tom Robinson, deputy chief of the Reno Police Department. Sparks, a city of 90,000 people, is just east of Reno. Students were returning Monday from a weeklong fall break.

"As you can imagine, the best description is chaos," Robinson said several hours after the attack. "It's too early to say whether he was targeting people or going on an indiscriminate shooting spree."

He said of the teacher: "In my estimation, he is a hero. We do know he was trying to intervene."

After the shooting, the Sparks Police Department posted a message on its website that read: "Stay away from Sparks Middle School 2275 18th St. We believe the suspect has been neutralized." The note was later removed

Sparks Middle School has an enrollment of 630 seventh- and eighthgrade students, according to its website. Classes have been canceled for the rest of the week.

Gov. Brian Sandoval of Nevada said in a statement that he was "deeply saddened to learn of the horrific shooting" and that the Nevada Highway Patrol was assisting the local authorities. In a statement, Sen. Harry Reid, D-Nev., called it "a traumatic morning."

"No words of condolence could possibly ease the pain, but I hope it is some small comfort that Nevada mourns with them," he said.

A note on the school's website said that all middle schools in Washoe County had implemented a "safe zones" policy, which permits any student who "feels threatened, bullied, or the recipient of acts of violence" to go to a designated classroom staffed by a teacher. The website said the county policy was adopted "due to the increase in gang activity, bullying, violence to students by other students, and lack of knowledge by the middle school student population" about how to get help.

Panama preparing to free most of freighter's North Korean crew

By Rick Gladstone
THE NEW YORK TIMES

The authorities in Panama said Monday that they would release 33 of the 35 North Korean crew members of a rusting freighter that was impounded more than three months ago for carrying a secret stash of Soviet-era Cuban military gear hidden under bags of brown

Neither the captain, who tried to slit his throat when the Panamanian marine police boarded the vessel, nor the captain's aide are free to go, said a top official at Panama's Foreign Ministry. The official, who spoke by telephone on the condition of anonymity because of ministry policy, said the two North Koreans had not cooperated and may still face criminal

The Foreign Ministry official said the other crew members had cooperated, and that all of them had asserted that they had no idea the vessel was carrying military cargo.

They have been given travel visas, the official says, but final arrangements for their departure have not been made yet.

The July 14 seizure of the freighter, the 450-foot Chong Chon Gang, near the Panama Canal caused a spat between Panama and North Korea and Cuba, one of the few countries that enjoys cordial relations with the isolated North Korean government.

The seizure shed light on the clandestine maritime trading practices of North Korea, one of the world's most impoverished countries, hobbled by United Nations sanctions over its nuclear weapons and proliferation activities.

The vessel's crew, armed with sticks, tried to resist the Panamanian boarding party and disabled the cranes used to unload the cargo hold, piled high with 200,000 bags of sugar.

Underneath, the Panamanians found two disassembled MiG jets, 15 MiG engines and nine anti-aircraft missiles. The Cubans acknowledged the military cargo was theirs and said they had been shipping it to North Korea for maintenance.

But the Foreign Ministry official said the parts were in "mint condition," suggesting that they had been intended for North Korea's use. The official also said Panama and Cuba had not discussed the military cargo, which remains impounded.

It was unclear what would happen to the Chong Chon Gang, despite demands by North Korea that the ship and entire crew be returned. The Panamanian official said the vessel was "in pretty bad shape after its very own crew damaged it when they saw the police coming."

Deadly bombing hits bus in southern Russia

MOSCOW — A suicide bomber attacked a bus in Volgograd, Russia, on Monday, killing at least five people and wounding more than 25, officials said, a case in which the violence of the turbulent North Caucasus apparently spilled into the Russian heartland

Witnesses said an explosion tore through the bus at about 2 p.m., and officials quickly designated the bombing as a terrorist attack.

Video taken by a car's dashboard camera and broadcast on the television channel Rossiya 24 showed a bright orange flame bursting from the center of the bus, which then virtually disappeared in a cloud of black smoke, as debris was hurtled across the three-lane roadway.

Local news agencies reported that investigators were focusing on the possibility that the attacker was a woman whose identity papers were found near the explosion. The local reports quoted officials who said the woman had been married to a leader of a rebel group in Dagestan, the predominantly Muslim republic in the North Caucasus where Russian security forces have been engaged in a fierce effort to suppress separatists.

Volgograd, previously known as Stalingrad, is about 520 miles north of Makhachkala, the capital of Dagestan, or just about halfway to Moscow.

—David M. Herszenhorn, The New York Times

Ruling near, J.C. Penney capitulates to Macy's

Days before a judge was expected to rule in the long-running legal dispute between Macy's and J.C. Penney over the right to sell branded Martha Stewart housewares, Martha Stewart Living Omnimedia and J.C. Penney scaled back the merchandising agreement at the center of the battle.

Under the revised agreement, J.C. Penney will not sell kitchen, bed and bath products designed by Martha Stewart that were sold under the label "JCP Everyday."

But it will continue to market other Martha Stewart merchandise, including window treatments, lighting and rugs under the label "MarthaHome." J.C. Penney will also return 11 million common shares that it acquired in the initial agreement and it will give up its two seats on the Martha Stewart board, according to the terms announced Monday.

Macy's, which had sued both J.C. Penney and Martha Stewart charging that they breached an exclusivity agreement that Macy's had with Martha Stewart covering all kitchen, bed and bath merchandise, declared immediate victory.

"It was a complete surrender," Theodore M. Grossman of the Jones Day law firm, the lead counsel for Macy's in the case, said after the agreement was announced. "Total victory."

The agreement came after months of a trial before Judge Jeffrey K. Oing, of New York's Supreme Court, who recently urged the parties to resolve their dispute and set a deadline of Friday for a possible ruling.

Even though the company's previous chief executive, Myron E. Ullman III, was brought back to try to rescue the longstanding Penney's chain, the company has continued to falter and stumble.

The company's stock price is well below its 2007 share price of \$49.63 on Oct 22, 2007. It was \$6.42 a share on Monday.

—Hilary Stout, The New York Time.

Pollution closes schools and roads in city in northeast China

BEIJING — School was canceled, traffic was nearly paralyzed and the airport was closed in the northeast Chinese city of Harbin on Monday as record pollution dropped visibility to less than 10 years.

A dark, gray cloud that the local weather bureau described as heavy fog has shrouded Harbin, home to 10 million people, since Thursday, but the smoke thickened significantly Sunday, soon after the government started the coal-powered municipal heating system for the winter.

"You can't see your own fingers in front of you," the city's official news site said. A resident of Harbin commented on Sina Weibo, the popular microblog, "You can hear the person you are talking to, but not see him." Another resident added that he could not see the person he was holding hands with

The airport in Harbin, the capital of Heilongjiang province, said on its official microblog Monday morning that dozens of flights had been delayed or diverted because the smog had reduced visibility so drastically. In the early evening, the airport said all flights had been canceled.

The Harbin government reported an air quality index score of 500, the highest possible reading and more than 10 times as polluted as the air in New York on Monday. Some Harbin neighborhood reporting stations showed that concentrations of PM2.5 — fine particulates that are 2.5 microns in diameter or smaller and especially harmful to health — were as high as 1,000 micrograms per cubic meter, according to the $China\ News\ Service$.

The Chinese government describes an air quality index between 301 and 500 as "heavily polluted" and urges people to refrain from exercising outdoors; the elderly and other vulnerable populations are supposed to stay indoors entirely. The U.S. Environmental Protection Agency uses a similar index that labels any reading between 301 and 500 as "hazardous."

Both scales reach their limit at 500. Foreign residents in Beijing declared an "airpocalpyse" last January when the U.S. Embassy reported an air quality index equivalent of 755. The World Health Organization has standards that judge a score above 500 to be more than 20 times the level of particulate matter in the air deemed safe.

On Monday, people in Harbin were covering their heads and mouths with scarves and masks to thwart the choking smell. Cars, with headlights on, were moving no faster than pedestrians and honking frequently as drivers struggled to see traffic lights yards away, the city's official news site said.

... —Mia Li, The New York Times



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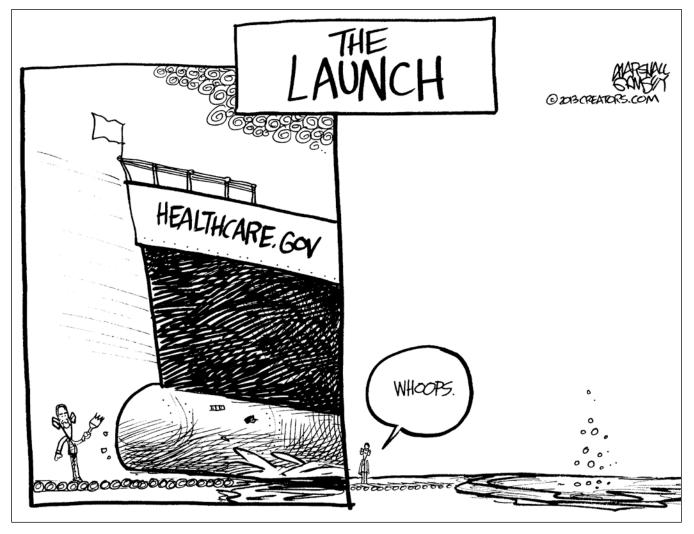
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CORRECTIONS

An article in Friday's issue on the new variations of the biology General Institute Requirement misrepresented the content of 7.016. Despite the description in the course catalog, 7.016 teaches the same amount of biochemistry as the other biology GIRs.

OPINION POLICY

Editorials are the official opinion of *The Tech*. They are written by the Editorial Board, which consists of Chairman Sarah Ritter, Editor in Chief Anne Cai, Managing Editor Ian M. Gorodisher, Executive Editor Deborah Chen, and Opinion Editor Jacob London.

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Letters to the editor, columns, and editorial cartoons are written by individuals and represent the opinion of the author, not necessarily that of the newspaper. Electronic submissions are encouraged and should be sent to *letters@tech.mit.edu*. Hard copy submissions should be addressed to *The Tech*, P.O. Box 397029, Cambridge, Mass. 02139-7029, or sent by interdepartmental mail to Room W20-483. All submissions are due by 4:30 p.m. two days before the date of publication.

Letters, columns, and cartoons must bear the authors' signatures, addresses, and phone numbers. Unsigned letters will not be accepted. *The Tech* reserves the right to edit or

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Saturday Stumper by Lester Ruff

Solution, page 9

ACROSS

- 1 US Special Forces home
- 8 Caste
- 15 Recent Lincoln biographer
- 16 Word from the Greek for 'healing'
- 17 It may get stuck on your car
- 18 Yields
- 19 Fast flight
- 20 Flowery delivery
- 22 Books, for short
- 23 White-gloves sport
- 25 Debussy piece
- 26 White-gloves wearer
- 27 Daring 29 Red state
- 30 Obvious slip
- 31 Checking in a tiny room 33 Fit for a King
- 34 Longest-serving member
- 35 Enticement
- 36 Surfing equipment
- 39 Short-term quarters
- 43 Twist in Oliver Twist
- 44 Bird __

- 45 Not windy
- 46 Came down
- 47 Tiffany, for one
- 49 Slap on
- 50 Fella
- 51 Attract attention, circa 1925
- 53 Serpent's tail
- 54 Dejected
- 56 Phrase associated with 23 Across
- 58 Media-kit contents
- 59 It's on Washington's
- quarter
- 60 Highway sign
- 61 Cuisinart products

DOWN

- 1 Classified category
- 2 Dependable participant
- 3 Unlikely stop for a restaurant reviewer
- 4 Dispose (of)
- 5 A chorus line
- 6 Driver's hazard

- 7 Spin
- 8 Took major steps
- 9 In that direction
- 10 Lean (on)
- 11 Equal
- 12 Sign of browning
- 13 Factory's working hours 14 Object of speculation
- 21 Spin
- 24 Manifest
- 26 Emulated a 26 Across
- 28 __ lines
- 30 Not very famous
- 32 What some pedals control 33 Farm sound
- 35 Tough guys
- 36 One living on Biscayne Boulevard 37 SeaWorld venue
- 38 "So what?" 39 Helpful sign
- 40 Plain
- 41 Opposite of "together"
- 42 Source of the Rhodes Scholarship endowment
- 44 Down-to-earth
- 47 Maverick
- 48 Battleground of 1967
- 51 Roll for a hole
- 52 Specialized "We made it!"

NEUNEUNEUN FUNEUN

10 11 12 13

18

59

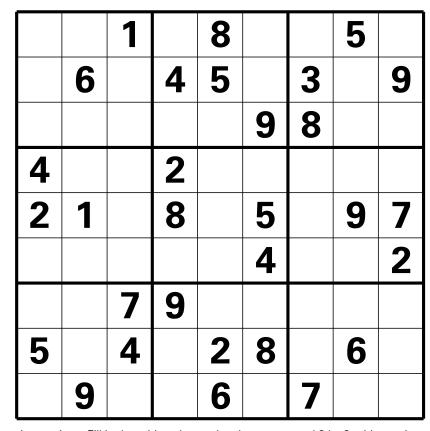
33

45

- 55 Spread (out)
- 57 One of an estimated quadrillion on Earth

Sudoku I

Solution, page 9



Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Sudoku II

19

23

27

31

46

50

54

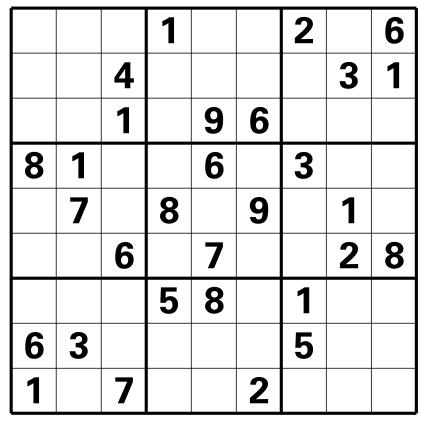
58

60

36 | 37 | 38

20

Solution, page 9



Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Sudoku III

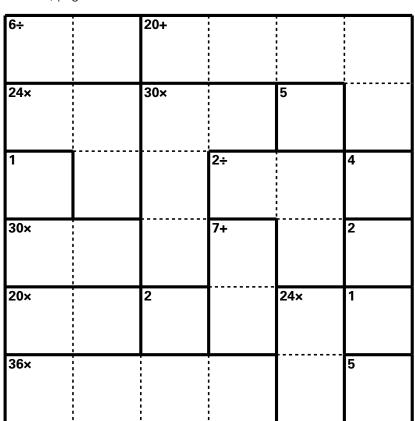
Solution, page 9

			5		4		9	
				8		3	6	
4				7				
	5	2			7	4		
6	4		3		2		7	1
		7	9			2	5	
				9				5
	9	4		1				
	1		4		5			

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Techdoku

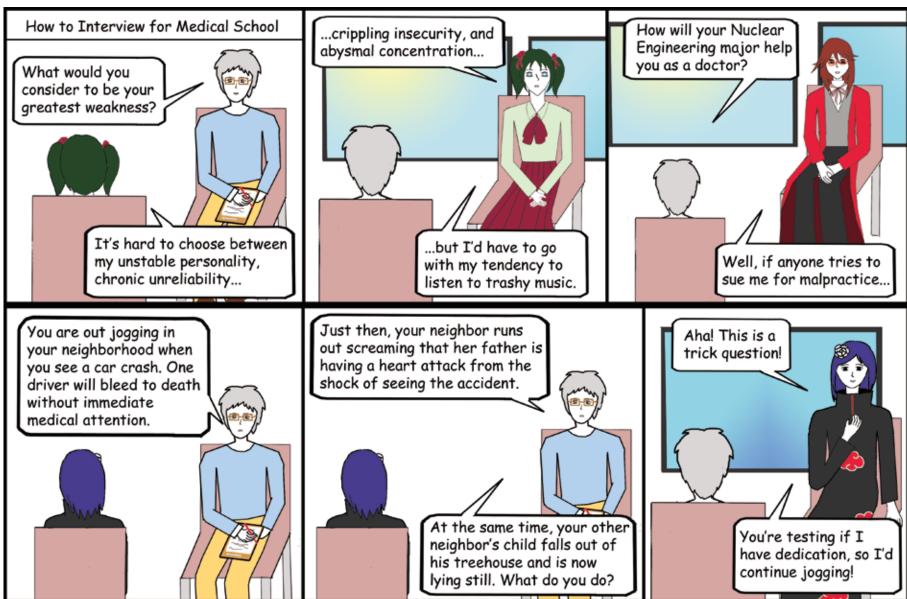
Solution, page 9



Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1-6. Follow the mathematical operations for each box.

6 THE TECH Tuesday, October 22, 2013

Somewhere on the Search for Meaning by Letitia Li



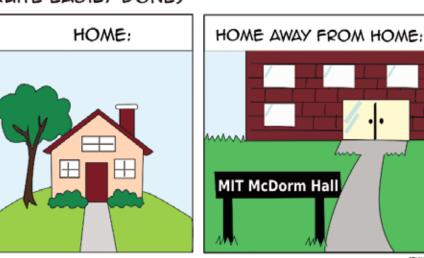
Q.E.D. (QUITE EASILY DONE)

PREVIOUSLY ON Q.E.D.:

HARDDRIVE MALFUNCTION; BOOTUP FAILURE;

W

ETERNAL SHUTDOWN

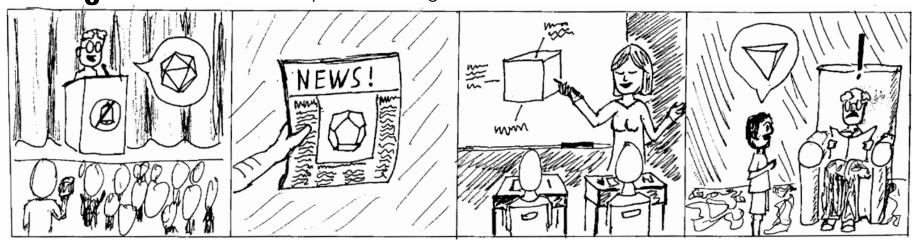






(THIS COMIC STRIP ACTUALLY BROUGHT TO YOU FROM YOUR LOCAL ATHENA CLUSTER)

Strangers to Fiction by Deena Wang







THE TECH 7 TUESDAY, OCTOBER 22, 2013

Limit on gatherings for FSILGs located in Boston

Additional restrictions result of recent inspections, may last until December or later

FSILGs, from Page 1

In response to the ISD's request, the AILG Board and the FSILG Office retained Tom Stohlman, the

It is not known when Boston will issue new Certificates of Inspection.

AILG's Building Safety Facilitator, to survey the houses. After an inspection of nine properties, Boston

ISD indicated that Boston cannot guarantee the safety of any of the MIT FSILG properties in Boston for assembly occupancy above the residential number.

"The concerns around assembly numbers are not related to a particular incident, but rather a number of FSILG-related issues," wrote Henry I. Humphreys, Senior Associate Dean for Residential Life & Dining, in a statement to The *Tech*, when asked if the occupancy evaluation was related to the incident last month when a freshman survived a four-story fall through a skylight at a Phi Sigma Kappa

party.
It is not known when Boston will issue new Certificates of Inspection with an updated assembly occupancy figure. "Residential Life & Dining and the Association of Independent Living Groups (AILG) are working on a timeline to have all of the houses reviewed and plans drafted," wrote Humphreys. "The architect may not be able to complete all 39 reviews until December. Once his findings are submitted to the City of Boston, the City must also review the submissions prior to issuance of the certificates, which we hope will

take no more than a few weeks." The assembly occupancy limit will not be revised until the new certificates are issued.

'Groups are able to host events outside of their facilities.

-Henry J. Humphreys SENIOR ASSOCIATE DEAN FOR RESIDENTIAL LIFE & DINING

"MIT is well aware of the hardship this will pose for our Bostonbased organizations," wrote Love in Friday's email. "MIT will support our community during this temporary occupancy restriction." Humphreys and Dean for Student Life Chris Colombo will be meeting with IFC, Panhel, and Living Group Council (LGC) leaders to discuss options for hosting large events. "Groups are able to host events outside of their facilities, and Residential Life & Dining is working with other stakeholders to identify spaces on campus for groups to use," wrote Humphreys.

FSILGs will learn more about the situation at a meeting this Thursday evening.



MIT Nightmarket, hosted by various MIT cultural groups, was held in Lobdell on Saturday evening and featured performances by many area groups.

A random sampling of people you'll meet during a typical dinner at The Tech:

Austin, Course 8 Chris, Course 16 Derek, Course **1** Sarah, Course 2 Ian, Course **9** Anne, Course 17 Joyce, Course **10** Annia, Course **3** Leon, Course 18 Dohyun, Course 4 Sara, Course 11 Jack, Course 19 Elijah, Course 5 Vince, Course **12** Stan, Course 20 Deborah, Course 6 Anthony, Course 14 Stephen, 21/CMS Maggie, Course **15** Keith, Course 22 Kali, Course 7

Meet your new pset support group



join@tech.mit.edu W20-483, 617-253-1541

This CSAIL SEMINAR SERIES, organized in cooperation with the Siri team at Apple, invites leading researchers in HLT to give lectures that introduce the fundamentals of spoken language systems, assess the current state of the art, outline challenges, and speculate on how they can be met. Lectures occur 2-3 times per semester and should be accessible to undergraduates with some technical background.

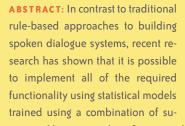
Human Language Technolog

Towards Open-domain Spoken Dialogue Systems

Monday, October 28, 2013 4:30 to 5:30 PM

Building 32-155 32 Vassar Street Cambridge, MA at 4:15

Refreshments





SPEAKER: **STEVE YOUNG CAMBRIDGE UNIVERSITY** JIM GLASS and VICTOR ZUE

pervised learning and reinforcement learning. This new approach to spoken dialogue is based on the mathematics of partially observable Markov decision processes (POMDPs) in which user inputs are treated as observations of some underlying belief state, and system responses are determined by a policy which maps belief states into actions.

Virtually all current spoken dialogue systems are designed to operate in a specific carefully defined domain such as restaurant information, appointment booking, product installation support, etc. However, if voice is to become a significant input modality for accessing web-based information and services, then techniques will be needed to enable spoken dialogue systems to operate within open domains.

The first part of the talk will briefly review the basic ideas of POMDP dialogue systems as currently applied to closed-domains. Unlike many other areas of machine learning, spoken dialogue systems always have a user on-hand to provide supervision. Based on this idea, the second part of the talk describes a number of techniques by which implicit user supervision can allow a spoken dialogue system to adapt on-line to extended domains.





For additional information go to: https://calendar.csail.mit.edu/events/116269



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SKETCH YOUR LOOK

Jeans

Finding the perfect pair

By Dohyun Lee

When talking about American style, jeans are an obvious topic. Jeans were invented in the United States by Jacob Davis and Levi Strauss in 1873. They were initially produced specifically for heavy-duty workers who needed protection from hazardous environments, but they are now one of the staples in the fashion industry. Despite the history and fame of jeans, we usually don't see their aesthetic beauty. The first thing that comes to mind when you think of jeans might be something like "blue." Come on, we need to know more than that!

We tend to think that blue is the only color for jeans. In fact, color for jeans is limitless. There are numerous different shades of blue you can choose from. Keep in mind that color can be a huge factor when it comes to styling, so be sure to take some notes on this part. A darker shade of blue, such as indigo, gives a vibe of dignity and respect, which is good for a formal occasion. In contrast, a lighter shade of blue, such as sky blue, gives you a casual and comfortable look. Something in between can be both formal and informal depending on how you integrate it with other clothes.

ing up your indigo jeans with a navy blazer, white oxford shirt, and brown dress shoes for a formal occasion. For a casual look, try on a grey t-shirt, light blue jeans, and white sneakers. There are so many ways to

integrate jeans with other pieces, so experiment with them.

In the big picture, jeans fall into two categories: single-stitched or double-stitched. You can differentiate them quite easily by turning them inside out. Single-stitched jeans have a zig-zag pattern of stitching on the inseam area, while double-stitched (aka selvedge jeans) have two vertical stitchings along the inseam. What we usually find in stores is singlestitched jeans since they are easier to mass produce, which means that they are cheaper than selvedge jeans. That does not mean that they are worse, but it means they offer a little less durability due to weaker stitching. On the other hand, since selvedge jeans are more durable, the price of a pair can go up to \$400. It

is undoubtedly expensive for a pair of selvedge jeans. But, if you really want to own a pair of jeans that can last for your lifetime, then don't hesitate to get one. Their price will definitely be paid off in the long run.

Fit-wise, there are only a few types of jeans. There

are straight, slim, skinny, boot-cut, relaxed, and carrot-fit jeans. Personal taste is a major factor for choosing the fit as well as the color. However, I strongly recommend straight or slim fit because they are more versatile than the others, and most importantly, they can embrace many body types. For example, skinny jeans are sometimes so skinny that you can't even put your legs in them. I personally do not own any skinny jeans, but I have tried them on a few times, and they were so skinny that I felt uncomfortable. I think that they are very specific for a particular body type — you need to have slender legs, which I don't have. That is why I am suggesting you to opt for a straight or slim fit as a safe choice. But as long as your jeans are comfortable and tailored to your body, the fit doesn't really matter. So if a fit looks good on you, wear it.

Because jeans have so many characteristics, I was not able to describe every single detail of them in this article. I suggest that you research the rest of the details on your own — you will learn so much. Look through inspiring lookbooks, watch some runway videos, etc. I am sure that you will pick up many great ideas.



TUESDAY

DOHYUN LEE-THE TECH

(6:00 p.m. – 8:00 p.m.) Sloan Coders Intro to Python workshop (bring laptops) — 32-124

(7:00 p.m. – 9:00 p.m.) LSC and American Australian Association show Australian short films — 10-250

WEDNESDAY

(11:00 a.m. – 12:00 p.m.) The Smallest Man-Made Jet Engine (Guinness World Record), with speaker Alexander Solovev — 13-2137

(6:30 p.m. – 8:00 p.m.) The Year Without Pants: Word-Press, Your Career & The Future, Q&A with speaker Scott Berkun — E25-111

THURSDAY

(5:00 p.m. – 6:00 p.m.) MISTI Netherlands info session, sponsored by MISTI, the Center for International Studies, and the MIT-Netherlands program — E40-496

(8:00 p.m. – 10:00 p.m.) A Sweet Trip Through Italy (2nd annual), sponsored by ARCADE and MITALY — 32-162 (Forbes Cafe)

FRIDAY

(8:00 p.m. – 10:00 p.m.) Family Weekend Concert presents: Celebrating Master Composers, free concert with the MIT Wind Ensemble, MIT Festival Jazz Ensemble, and Rambax — W16 (Kresge Auditorium)

SATURDAY

(6:00 p.m. – 8:00 p.m.) Cena a Las Seis, sponsored by the Latino Cultural Center — Walker Memorial

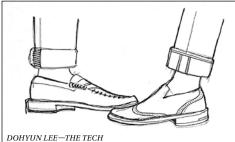
SUNDAY

(3:00 p.m. – 5:00 p.m.) Legal aspects of business in China, in the USA and in between, with speaker David L. Woronov, sponsored by MIT China Innovation and Entrepreneurship Forum — E51-145

MONDAY

(3:00 p.m. – 4:00 p.m.) Business etiquette workshop, sponsored by MIT Global Education & Career Development — 12-122

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Monstrous sales and roaring stock, but no profit

Amazon's dilemma: company's stock at a record high, but no significant profit made

By David Streitfeld THE NEW YORK TIMES

SAN FRANCISCO — Nearly ev-

ery day, Amazon announces a new venture

It just bought an online education company and introduced a payment mechanism for Internet retailers that competes with Pay-Pal. It started selling wine for the first time in New York, updated its line of tablets, gave the go-ahead to three new comedy pilots and began a design competition for its fashion division. It is setting up mini-warehouses inside suppliers like Procter & Gamble to ship goods faster.

But one thing it will not be announcing this month: a significant

Who cares? Amazon lost money in 2012, and analysts are anticipating another loss when the company releases its third-quarter results Thursday. Yet the stock is at a record high.

Amazon shares are up around 150 percent since mid-2010, which perhaps not coincidentally was the last time the company had sizable profits. In other words, investors only really decided they loved the company when net income began to slide.

"This isn't supposed to happen," said William H. Janeway, an economist and venture capitalist. "It violates mainstream finance theory. Very few companies have been valued this way outside a systemic bubble.

No one is asserting that Amazon is a flat-out bubble, but there is an increasingly noisy debate about when it will - or even whether it can — deliver the sort of bottom-line profits investors normally demand from a company expected to post \$75 billion in revenue this year.

The company declined to comment.

Some analysts point out that those sales are negligible when set against the market being targeted by Jeff Bezos, Amazon's founder and chief executive. "The market is effectively limitless: all of global consumer commerce and maybe business-to-business commerce as well," said Janeway, author of "Doing Capitalism in the Innovation Economy."

With that prize as the goal, making money today would be a positive hindrance. As Benedict Evans, an analyst based in London, put it: "Bezos has chosen to run Amazon to be the biggest, most powerful and successful retailer on Earth 20 years from now. Any fool could run it profitably today."

To make a significant profit, some ways of doing business will have to change, which might alienate customers and slow that roaring revenue growth. That, in turn, would cause investors to demand profits even sooner.

"At some point, the piper must be paid," said George Colony, chief executive of Forrester Research.

How? "By raising prices. I don't see any other way."

Economist Lawrence R. Klein dies at 93

MIT alum and Nobel-winning economist passed away on Sunday

By Glenn Rifkin

THE NEW YORK TIMES

Lawrence R. Klein, who predicted America's economic boom after World War II and who was awarded the 1980 Nobel in economic science for developing statistical models that are used to analyze and predict global economic trends, died Sunday at his home in Gladwyne, Pa. He was 93.

His daughter Hannah Klein confirmed the death.

As World War II was ending, Klein, widely regarded as a brilliant theorist, disputed the conventional wisdom that the postwar period would drive the U.S. economy back into a lengthy depression. Using his econometric models based on mathematical equations, he correctly forecast a flourishing economy built on surging demand for consumer goods and housing.

Although he often testified before federal bodies and served as an economic adviser to limmy Carter during his 1976 presidential campaign, Klein chose to remain in academia — he taught economics at the University of Pennsylvania for 33 years - and rejected an offer to join the Carter administration.

'I am just an academic giving advice," he told People magazine in 1976. "If you are a technician and are asked for help, it is a social obligation of citizenship to give it."

Klein's use of vast survey data to build statistical economic models for the United States and several other countries has been adopted by economists around the world.

'Few, if any, research workers in the empirical field of economic science have had so many successors and such a large impact as Lawrence Klein," the Nobel committee wrote in awarding him the Nobel Memorial Prize in Economic

Jere R. Behrman, a professor of

economics and sociology at Penn and a longtime colleague, said Klein's work was built on the idea that the economy is a set of complex organisms — millions of people, millions of households, corporations, government and other entities — and that it is important to have simple models of these economies to understand their essence. Such models, he said, allow economists "to make predictions about what is likely to happen in the economy if there is a significant change in international markets, such as an increase in the price of petroleum."

"Before Klein," he added, "there had been very little work on these aggregate models."

Lawrence Robert Klein was born in Omaha, Neb., on Sept 14, 1920, the second-born of three children of Leo Byron Klein, an office clerk, and the former Blanche Monheit. He attended public schools there and became fascinated with economics at a young age.

"Although I was not aware of it at the time, growing up during the Great Depression was to have a profound impact on my intellectual and professional career," he wrote in an autobiographical essay for the Nobel committee.

At the same time, he developed an obsession for baseball and became a batboy for a minor league team in Omaha. But his dream of a baseball career ended when, at age 10, he was hit by a car and suffered a badly broken right leg, an injury that affected him for the rest of his life, Hannah Klein said. (At Penn, he became a passionate Phillies fan, she said.)

After moving with his family to San Francisco, he received an undergraduate degree in economics from the University of California, Berkeley, then pursued graduate studies at the Massachusetts Institute of Technology, becoming one of its first Ph.D. students in economics and earning his doctorate in just two years.

At MIT, Klein was a protégé of the economist Paul A. Samuelson, a professor only five years his senior. Samuelson, the first American to win the Nobel in economic science, in 1970, became his dissertation adviser and provided what Klein called "an unforgettable experience."

He left MIT in 1944 to join the econometrics team at the Cowles Commission of the University of Chicago. Its director, Jacob Marschak, gave him the assignment of reviving the early attempts at econometric model building that had been made by Jan Tinbergen, a Dutch economist and the 1969 Nobel laureate.

In Chicago, Klein was surrounded by economic heavyweights like Herbert A. Simon, Trygve Haavelmo and Theodore Anderson. It was also there that he met Sonia Adelson, an economics student from Newport, R.I., whom he married. It was his second marriage.

His wife survives him, as do three daughters, Hannah Klein, Rebecca Klein Kennedy Rachel Klein; a son, Jonathan; seven grandchildren; and four great-grandchildren.

After spending an academic year in Europe in 1947, Klein returned the next year to join the staff of the National Bureau of Economic Research in Cambridge, Mass., invited by Arthur F. Burns, who also specialized in macroeconometrics and was later chairman of the Fed-

During his heady days in Chicago, Klein joined the Communist Party, a move that later haunted him. Hannah Klein said. In the 1976 interview with People, he said that party members had insisted that he sign up before lecturing to a Communist audience on Marxist economics. He left the party in 1947. But while teaching at the University of Michigan in 1954, his past association came up during the House Un-American Activities Committee hearings, and the university denied him tenure.

Klein then uprooted his family and moved everything, including the family Chevrolet, to England, where he taught at Oxford for four years. In 1958, an invitation from the Wharton School of the University of Pennsylvania brought him home. He joined the Penn economics faculty and taught graduate and undergraduate students until 1991. He was named a Nobel laureate shortly before his 60th birthday.

As part of his research, he predicted correctly that the pent-up demand for consumer goods after World War II, coupled with the purchasing power of the returning soldiers, would result not in an economic crisis but in a surge in spending and a flourishing economy. He was equally astute in predicting a similar result at the end of the Korean War several years later.

In his later work, he extended his theories on model building to focus on the links between different economies — the flow of goods and services and capital between countries. He traveled to other countries frequently to assess their economies and founded The International Economic Review, a journal produced jointly by Penn and Osaka University in Japan. In Philadelphia, he founded a research group, Wharton Econometric Forecasting Associates (later acquired by IHS, a Denverbased research company), and was principal investigator of its Project LINK, which created a global econometric model with which to forecast trends.

The only satisfactory test of economics is the ability to predict,"



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if self.interest == True:

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---:---F1 joinTechno.py

Solution to Sudoku

1 3 8 7 2 5 6 7 6 8 4 5 2 3 1 9 3 2 5 6 1 9 8 7 4 7 3 2 9 6 1 8 5 2 1 6 8 3 5 4 9 7 8 5 9 1 7 4 6 3 2 6 8 7 9 4 1 5 2 3 3 4 7 2 8 9 6 1 5 9 2 5 6 3 7 4 8

Solution to Sudoku II

7	8	5	1	3	4	2	9	6
9	6	4	2	5	8	7	3	1
3	2	1	7	9	6	8	5	4
8	1	2	4	6	5	3	7	9
4	7	3	8	2	9	6	1	5
5	9	5 4 1 2 3 6	3	7	1	4	2	8
2	4	9	5	8	3	1	6	7
6	3	8	9	1	7	5	4	2
1	5	9 8 7	6	4	2	9	8	3

Solution to Sudoku III

3 4 7 9 8 2 6 1 5 9 7 5 2 8 1 3 6 4 4 8 3 6 7 9 5 1 2 5 2 1 6 7 4 3 9 8 6 4 9 3 5 2 8 7 1 3 7 9 4 8 2 5 6 3 2 8 7 9 6 1 4 5 9 4 8 1 3 6 2 7 5 1 6 4 2 5 9 8 3

Solution to Techdoku

6	1	4	5	2	3
6 3	4	1	2	5	6
1 5	2	5	6	3	4
5	6	3	4	1	
4 2		2		6	1
2	3	6	1	4	5

Solution to Crossword

F T B R A G G S T R A T U M O R E I L L Y T H E R A P Y R O A D T A R R E L E N T S R U N M O R A T O R Y M L I T E P E E E T U D E M I M E N E R V E I R E B O N E R T R Y I N G O N M B L U E S Y D E A N M O D E M S C R A S H P A D I R O N Y F L U T E R S E A L I T L O U I S D A U B M A C M P O L E S I T M I N E I N A F U N K E N G A R D E A D R A T E S R A I N I E R N O E N T R Y S I F T E R S

10 The Tech

Tuesday, October 22, 2013

Reif joins Advanced Manufacturing Partnership

Will lead steering committee of university and corporate officials on manufacturing

Manufacturing, from Page 1

novation" (IMI), to work with existing manufacturers to promote innovation. From the report made by the first AMP, the NNMI was conceived to bridge the gap between research and production, a so-called "valley of death" in the business production world.

The IMIs are proposed as non-profit institutes with federal, state, and regional government support and private industry funding, according to Schmidt. He expects that the private investment in such institutes would at least match the government contribution, adding, "Over time, you would like to see the institute sort of become nominally self sufficient. So it would wean itself from significant federal support."

Currently, there are three pilot IMIs funded by the Department of Defense and the Department of Energy. The DOD maintains two IMIs: the Lightweight and Modern Metals Manufacturing Innovation Institute and the Digital Manufacturing and Design Innovation Institute. The DOE has founded

the Clean Energy Manufacturing Innovation Institute. These three institutes will join the pilot IMI program founded in Youngstown, Ohio, which President Obama mentioned in his State of the Union address last year.

NNMI, startups, and MIT

When asked about how the new partnership will affect MIT, Schmidt stated, "The actions of AMP is to convert the Production in the Innovation Economy (PIE) study to real-world application. It's kind of like AMP is our own place for experimentation." PIE, a study chaired by political science professor Suzanne Berger and biology institute professor Phillip A. Sharp, examined production capabilities in relation to sectors including large corporations, start-ups, and manufacturing in China and Germany and reported its results in September.

One of the recommendations of PIE is risk-pooling for large capital, or bringing multiple companies together in one space to minimize risky operations, a goal to be shared by the NNMI according to

Schmidt.

The IMIs are founded with the hopes of making strong partnerships with public research universities. Schmidt suggested they would extend the research abilities of universities and their capacity to continue to work on new technology. While no IMIs have been founded in the Cambridge area, Schmidt hopes that a new IMI will form based around the hub of life sciences/biotechnology in this region.

money for capital equipment."

He continued, stating that the venture capitalist model for new companies affects those startups focused on non-software products, as many investors see major inputs into capital as "highly inefficient." According to Schmidt, these efforts could come in to fund larger, higher-cost startups.

The AMP committee appointment coincides with Reif's newly outlined Innovation Initiative. Headed by Associate Prof. Fiona

IMIs are proposed as non-profit institutes with federal, state, and regional government support and private funding.

IMIs are also thought to fill some gaps created by startups in the production process. Schmidt maintained that startups and IMIs can work together constructively in the same industry space. "When you have a new technology — imagine if I'm a startup and I want to take this new disruptive 3D printing for metals — as a startup, one of the difficulties startups have is that it is very difficult to raise

Murray of the Sloan School and Prof. Vladimir Bulovic, this initiative is tasked with strengthening MIT's "innovation ecosystem" and applying the results of PIE.

AMP on education

AMP 1.0 also made a number of recommendations for increasing the educated workforce by empowering community colleges. Schmidt stated that MIT's

major involvement with digital learning resources, such as edX, could transform these vocational courses. "A number of community colleges cannot fill the seats for their vocational courses because of the high commute times," said Schmidt. To solve this problem, Schmidt concluded, "MIT's increased involvement with community colleges can allow these institutes to deliver resources remotely to solve this problem."

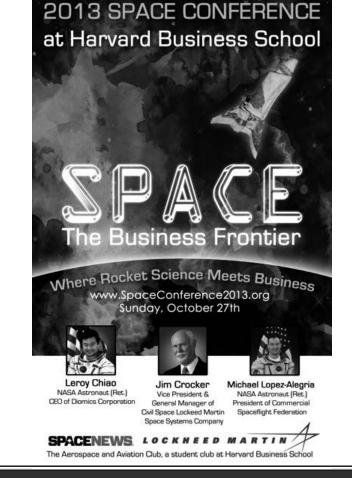
While there is no current mechanism for student input for AMP, Schmidt mentioned the possibility of a northeast regional panel meeting being hosted at MIT in the future. AMP 1.0's regional meeting at MIT, which took place on November 28, 2011, included workshops throughout the day with possible venues for student and community input.

Schmidt compared the spinoffs of AMP and the newly created Innovation Initiative to the MIT Energy Initiative (MITEI). "The expectation here is that the students will engage in this initiative and many new clubs and ideas will be spawned from this," he said.

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Bingham scores twice in win

Engineers stay undefeated within NEWMAC play

By Charlotte Brackett SPORTS STAFF

In a New England Women's and Men's Athletic Conference (NEW-MAC) game on a uncharacteristically warm late October afternoon, Sean D. Bingham '16 netted two goals to lead the MIT men's soccer team to a 2-0 win over Clark University. Bingham's NEWMACleading 14 goals on the season puts him sixth in the country for goals per game and tied for seventh for total goals. Tech is now 9-3-1 for the season and remains undefeated in conference action with a record of 4-0-1. The Cougars dipped to 3-10-2 and 0-4-1 in league play.

Just 11 minutes into the first half, following a cross from Austin E. Freel '16, Bingham scored his first goal of the game from inside the box, shooting to the left side of the net and past the hands of diving Clark keeper Alfonso Alvarez. For the rest of the period, goalie Samuel G. Cannon '15 saw more action than Alvarez, having to make three saves compared to Alvarez's one.

With 10 minutes remaining in the half, Kyle Russo took a point blank shot from inside the net but Cannon was able to make the save to preserve MIT's lead. At the 40 minute mark, Alvarez made an impressive save when he punched a shot by Nicholas A. Diamantoni '15 over the crossbar. Seconds later, he caught a corner kick, also sent by Diamantoni, which was heading directly towards the right corner of the net, preventing the Engineers from increasing their lead.

A minute and a half into the second 45-minute period, Bingham found the back of the net once again after receiving a quick pass from Matthew A. Monheit '14 directly outside of the cage, shooting to the right corner of the net. For the next 20 minutes, both teams struggled to gain possession and the ball spent a lot of time going from one side of the field to the other. MIT took 10 shots during this time and only two of them had to be saved by Alvarez. With three and a half minutes left in the game, Kenneth Vera took a promising shot but was blocked by

Matthew De La Ossa. MIT defense played well during the second half, blocking all but three of Clark's attempts at goal, the others being saved by Cannon. When the clock ran out, Tech walked away with its fourth straight win.

MIT outshot Clark 27-12. Cannon, who is now 3-2 for the season and earned his second consecutive shutout after recording 15 saves against Tufts on Wednesday, had six saves compared to Alvarez's eight. Bingham and Diamantoni both took five shots, with three of them apiece being on goal.

The Engineers will play in their second to last non-conference game on Wednesday, Oct. 23 when they host Framingham State University at 6:00 p.m. Then they will be on the road to face Springfield College, who is currently sitting in third in the NEWMAC standings, on Saturday, Oct. 26 at 1:00 p.m. The season is slowly winding down for MIT, as there are just two and a half weeks left until the NEWMAC Championships, which will begin on Wednesday, Nov. 6.

UPCOMING HOME EVENTS

Tuesday, October 22

Women's Soccer vs. Salem State University

4 p.m., Steinbrenner Stadium

Wednesday, October 23

Sailing vs. Midweek Firefly Invite II 4 p.m., Charles River

Men's Soccer vs. Framingham State University

6 p.m., Steinbrenner Stadium

Do you wish your sport was covered?

Hello, Athletes, look at the sports page, now back to you, now back to the sports page, now back to you. Sadly, your sport isn't there, but if you started writing for *The Tech*, it could be. Look down, back up, where are you? You're on the front page. Anything is possible when you write for *The Tech*.

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12 THE TECH TUESDAY, OCTOBER 22, 2013

Los Angeles Clippers expected to take Pacific

Warriors to come in close second, Lakers to struggle after losing Dwight Howard

By Nick Lopez SPORTS STAFF

NBA Pacific Division

1. Los Angeles Clippers

The Los Angeles Clippers had another busy offseason this year, dealing backup point guard Eric Bledsoe and aging small forward Caron Butler to the Phoenix Suns in exchange for swingmen Jared Dudley and

LOS ANGELES

J.J. Redick.

Redick is a sharpshooter, with an underrated ability to

play one-on-one defense, who will help spread the floor so All-Star PF Blake Griffin can continue to punish teams with his ever improving post and midrange game. Dudley is your typical 3-and-D guy; he is a smart player who will make the right play at the right time, defend a team's top player and then spread the floor with his excellent shooting touch.

The additions of Dudley and Redick easily make up for the loss of Bledsoe on the defensive end. Arguably the biggest move the Clippers made this offseason was resigning All-Star PG Chris Paul, arguably the best point guard in the league and the key to the Clippers smooth offense.

Also new is former Celtics Coach Doc Rivers, who is a major upgrade over Vinny Del Negro due to his championship experience and ability to command respect from even the greatest of egos, such as Rajon Rondo. Rivers has already made an immediate change to the Clippers team culture by requesting that the Lakers' Championship banners be covered up by pictures of the current Clippers lineup during Clipper home games in an attempt to have the historically pro-Lakers Staples Center have a more Clippers-friendly environment during their

In a weak division, the Clippers made enough improvements to maintain their ride atop the Pacific Division.

2. Golden State Warriors

The Golden State Warriors shocked a lot of people with their run in the playoffs last season, reaching the second round and pushing the eventual Western Conference

Champion Spurs to 6 games.

Not content with the early exit, this offseason the Warriors went out and signed swingman Andre Iguodala to

improve their small forward position. Iguodala, who played for the Nuggets last season, is an excellent perimeter defender and his offensive game should flourish with the Warriors uptempo offense

like it did in the Nuggets' system. Stephen Curry, coming off a ridiculous

playoff run, is now on the verge of being a superstar, but due to his history with injuries, the question still looms whether he can maintain that level of play over an entire season. I would love to say that he can, but I just cannot say that with certainty.

The Warriors' rebounding and defense should be much improved with a full season of Andrew Bogut, who missed most of last season but will be healthy at the start of this season. Along with PF David Lee, the Warriors have a strong post presence for the first time in recent memory, and this new focus on defense, evidenced by the Iguodala signing this offseason and the return of Bogut this season, is welcome change for fans used to the old "defense doesn't matter" mindset of previous Warriors teams.

The Clippers and the Warriors are the clear top two teams in the Pacific Division, but even with the Iguodala addition, the uncertainty surrounding the Warriors' two injury-prone starters Curry and Bogut will ultimately cause the Warriors to settle for second place.

3. Los Angeles Lakers

Stay. The one hope for the Lakers this offseason was the exact thing that didn't happen.

He didn't stay. Dwight Howard left the Lakers for the Houston Rockets this offseason, leaving LA with a gaping hole at center. Former

Clipper Chris Kaman was signed as an attempt to patch things up, but a post duo of two aging unathletic bigmen leaves much to

Pau Gasol should have a much better season this year now that he can move back to his comfort zone closer to the basket. Last season, Gasol was forced to play on the perimeter to accommodate Howard, who can only play down near the basket. The combo of Kaman and Gasol, who both can shoot and play the post pretty proficiently, will allow the Lakers to have a little fun with their offensive sets, but against young athletic big men, which most teams seem to have now, this post duo will struggle.

In a surprising turn of events, Kobe Bryant, who tore his Achilles' tendon at the end of last season, has been cleared for all activity and is expected to return for the start of the regular season a mere 5 months after he initially injured it. Recovery from a torn Achilles' tendon can take upwards of 9 months, so it truly is astonishing that a man at his age could come back so soon from this kind of injury. Regardless of his shady recovery methods, Kobe is still Kobe, and he alone can lead a team to 30 wins, but with a supporting cast as weak as his, playoffs will be tough to make.

Expect the Lakers to compete for that fi-

4. Sacramento Kings

The Sacramento Kings hope that their latest lottery pick turns out to be the superstar they so desperately need.

Former Rookie of the Year Tyreke Evans was allowed to leave to New Orleans this offseason after a couple of disappointing seasons following his incredible rookie campaign. Damarcus Cousins has

yet to show the ma-turity of an NBA player, and despite his incredible skillset, he might be more of a headache than he is worth. Last year's number 5 pick Thomas Robinson, who was pegged to form one of the great young post duos along with Cousins, has already been shipped out and given up on.

And now we look at Ben McLemore, this year's number 7 pick, identified as arguably the best scorer in the draft and the player with the highest chance of being an NBA superstar, yet who struggled mightily in the Las Vegas Summer League with his shot selection and scoring ability. On a team lacking veteran presence, McLemore is going to have to learn the ropes of the NBA quickly, since he and Cousins will be expected to carry the offensive load.

Grievis Vasquez will attempt to bring some order to this team with his brilliant court vision and play making ability, but the success of this team will ultimately come down to the youngsters, who have failed to show the ability to win consistently in this league in the past. Another disappointing season for Sacramento.

5. Phoenix Suns

Rebuilding from the bottom is a very long process, and the Phoenix Suns have just gotten started. Last season was forgettable, and

this draft they selected O. Alex Len, who may end up being the most talented big man in the draft, but is definitely a couple of years away from being an impact player.

This offseason the Suns traded away a solid player in Jared Dudley to the Clippers in return for PG Eric Bledsoe, who has the potential to be an exciting starting point guard, yet who is severely unproven. In a reserve role for the Clippers last season, he was the defensive enforcer off the bench who would provide an instant spark of energy to the bench unit, a large part of why the Clippers had the most dangerous bench in the league last season.

Phoenix is hoping he can bring that energy for an entire game while starting alongside Goran Dragic in the backcourt. This backcourt will have an interesting dynamic since both are capable ball handlers, but Dragic is by far a better shooter than Bledsoe, meaning Dragic will most likely play off ball more often than Bledsoe so he can spread the floor for Bledsoe's penetrations. On defense it's the opposite story; Bledsoe, being much bigger and much better at applying pressure defense than Dragic, will probably be counted on to guard the larger of the two guards while Dragic picks up the ballhandler.

It will be interesting to watch how this dynamic unfolds during the regular season, but honestly, this is the only interesting reason to watch the Suns this season.



Japan's Continuing Nuclear Nightmare



The MIT women's openweight crew team cuts through the water during the annual Head of the Charles regatta this Saturday, Oct. 19.

Thurs, Oct 24, 2013

5:30p - 7:00p MIT Bldg 32-155 | Stata Center 32 Vassar St, Cambridge

Speakers: Richard Samuels, Ken Buesseler, Patrick Stackpole

Moderator: Ken Oye

For more information, visit:

http://web.mit.edu/cis/eventposter_102413_japan_nightmare.html

Can you beat this drawing? Join Illustrators at The Tech! E-mail join@tech.mit.edu



Justin R. Wallace '15 plows through the defense in a football game against Nichols College on Friday, Oct. 18. MIT defeated Nichols 48-0.